

WHAT IS CLAIMED IS:

1. A system for making a UV-absorbing pattern, the system comprising:

a donor element comprising:

a substrate,

5 a layer of IR-sensitive transfer material coating at least a portion of the substrate,

a layer of UV-absorbing material coating the IR-sensitive transfer material, wherein the layers of the IR-sensitive material and UV-absorbing material have a combined UV-absorption coefficient of at least about 1.0; and

10 a receptor element.

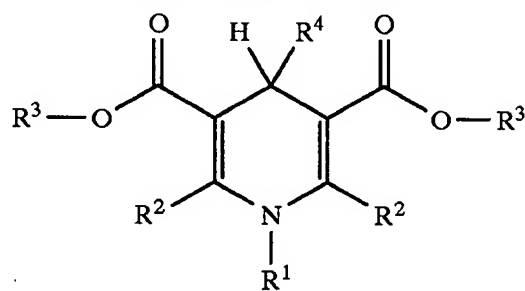
2. The system of claim 1, wherein the IR-sensitive transfer material comprises:

a binder comprising a hydroxylic resin,

a fluorocarbon additive,

15 a cationic infrared absorbing dye,

a latent crosslinking agent having the formula:



where R¹ is selected from the group of H, an alkyl group, a cycloalkyl group, and an aryl group, each R² and R³ is independently an alkyl group or an aryl group, and R⁴ is an aryl group, and a dispersible material, and

20 wherein the receptor element comprises a textured surface.

3. A method for making a UV mask, the method comprising:

25 providing a system of claim 1;

exposing the donor element to a digital image-wise IR laser radiation; and

transferring substantially all of the IR laser-irradiated portions of the layer of IR-sensitive material and layer of UV-absorbing material from the donor element to the receptor element.

- 5 4. The method of claim 3, wherein the digital images-wise IR laser radiation produces a half-tone image pattern in the the layer of IR-sensitive material and layer of UV-absorbing material.

- 10 5. A printing method, comprising:
digitally generating a UV mask;
exposing a UV-sensitive film to a UV radiation through the UV mask; and
developing the UV-sensitive film.

- 15 6. The printing method of claim 5, wherein the step of digitally generating a UV mask comprises
providing a thermal laser transfer imaging system that comprises:
a donor element, comprising:
a substrate,
a layer of transfer material coating at least a portion of the substrate, the
20 transfer material containing both an IR-sensitive material and a UV-absorbing material, the layer having a UV-absorption coefficient of at least about 1.0, and
a receptor element;
exposing the donor element to a digital image-wise IR laser radiation.

- 25 7. The method of claim 5, wherein digitally generating a UV mask comprises:
providing a thermal laser transfer imaging system that comprises:
a donor element, comprising:
a substrate,
30 a layer of IR-sensitive transfer material coating at least a portion of the substrate,

- a layer of UV-absorbing material coating the IR-sensitive transfer material,
wherein the layers of the IR-sensitive material and UV-absorbing material have a combined UV-absorption coefficient of at least
5 about 1.0, and
a receptor element;
exposing the donor element to a digital image-wise IR laser radiation; and
transferring substantially all of the IR laser-irradiated portions of the layer of
IR-sensitive material and layer of UV-absorbing material from the donor
10 element to the receptor element
8. The method of claim 5, wherein the developed UV-sensitive film comprises an image of a first color, the method further comprising generating a digital image of a second color and combining the images of the two colors.
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9. The method of claim 7, wherein the developed UV-sensitive film comprises an image of a first color, the method further comprising generating a digital image of a second color and combining the images of the two colors.
- 20 10. The method of claim 8, wherein generating a digital image of a second color comprises:
providing a thermal laser mass transfer system, comprising:
a donor element comprising:
a substrate, and
25 a layer of IR-sensitive transfer material coating at least a portion of the substrate, and
a colorant of the second color, and
a receptor element;
exposing the donor element to an image-wise IR laser radiation; and
30 transferring the IR-irradiated portions of the layer of IR-sensitive transfer material from the donor element to the receptor element.

11. The method of claim 10, wherein the second color is chosen from the group consisting of cyan, magenta, yellow and black, and the first color is a color other than cyan, magenta, yellow or black.

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12. A method of generating an image made of at least two superimposed sub-images, each sub-image being of a different color, the method comprising:
using a digitally controlled laser source to cause at least a portion of a layer of a colorant of a first color from a first donor element to be transferred to a
10 first receptor element;

overlaying the first receptor element with a UV-sensitive film;

using either the digitally controlled laser source or another digitally controlled laser source to cause at least a portion of a layer of a UV-absorbing thermal donor to be transferred from a second donor element to a second receptor;

15 imagewise exposing the UV-sensitive film to a UV-radiation through either the second donor element or the second receptor element; and
developing the UV-sensitive film.